

Amendments to the Specification

Please replace the paragraph on page 1, line 8, under the section entitled "CROSS REFERENCE TO RELATED APPLICATIONS", with the following:

~~Not Applicable~~ This application is a continuation of co-pending application Serial No. 10/352,668, filed January 28, 2003, which is a continuation of application Serial No. 09/881,421, filed June 14, 2001, now U.S. Patent No. 6,527,626, which is a division of application Serial No. 09/593,045, filed June 12, 2000, now U.S. Patent No. 6,254,460, which is a division of application Serial No. 09/187,307, filed November 4, 1998, now U.S. Patent No. 6,409,586, which is a continuation of application Serial No. 08/917,018, filed August 22, 1997, now U.S. Patent No. 5,919,082.

Please replace the paragraph on page 1, lines 13-17, with the following:

The present invention generally relates to mechanical polishing of a surface. More particularly, the present invention relates to composite fixed abrasive polishing pads and methods of use for mechanical polishing of the surface on a semiconductor substrate wafer.

Please replace the paragraph on page 2, lines 14-27, with the following:

Other methods for globally planarizing the outermost surface of the wafer include chemical etching, press planarization and mechanical polishing, which includes

chemical mechanical polishing, or planarization, (CMP). In chemical etching, the second layer is deposited over the preceding layers as described above and is chemically etched back to planarize the surface. The chemical etching technique is iterative in that following the etching step, if the surface was not sufficiently smooth, a new layer of polymer or oxide must be formed and subsequently etched back. This process is time consuming, lacks ~~predictably~~ predictability due to its iterative nature, consumes significant amounts of oxides and/or polymers in the process, and generates significant amounts of waste products.

Please replace the paragraph on page 3, lines 13-20, with the following:

The size and concentration of the particles used to abrade the surface ~~direct~~ directly affect the resulting surface finish. If the particulate concentration is too low or the particle size too small, mechanical polishing will not proceed at a sufficient rate to achieve the desired polishing effect in the time provided. Conversely, if the particulate concentration is too high or the particles are too large, then the particulates will undesirably scratch the surface.

Please replace the paragraph from page 4, line 32 to page 5, line 6 with the following:

Efforts have been made in the prior art to decrease the variability and increase the quality of the polish provided by CMP techniques. For instance, U.S. Patent No. 5,421,769 to Schultz et al. discloses a noncircular polishing pad that attempts to

compensate for uneven polishing that occurs as a result of the edges of the wafer traveling a greater distance across the polishing pad when a spinning polishing motion is used. U.S. Patent No. 5,441,598 to Yu et al. discloses a polishing pad having a textured polishing surface that attempts ~~for~~ to provide a surface that will more evenly polish wide and narrow depressions in the surface.

Please replace the paragraph from page 11, line 28 to page 12, line 2 with the following:

In practice, a portion of the second member 24 is removed from the pad 20 so that a portion of the first member 22 containing the first polishing surface 26 extends beyond the second polishing surface 28, as shown in Fig. 3. The amount of the second member 22 that is removed can be ~~control~~ controlled so that only an effective amount of the first member 22 is exposed to provide the desired polishing operation. The second member 24 can be removed either mechanically or chemically, such as described in U.S. Patent Application Serial No. 08/743,861, now U.S. Patent No. 5,725,417.

Please replace the paragraph on page 15, lines 6-20 with the following:

The pad 20 is attached to the platen 36 and a wafer is attached to the wafer support 46. The wafer support 46 is brought sufficiently close to the polishing pad 20 to ~~effect~~ affect the polishing operation by placing the wafer device surface 42 in contact

with the first member 22, either directly or via polishing chemicals or the abrasive material 32. The polishing chemicals are dispensed between the wafer device surface 42 and the first polishing surface 26 and the polishing pad 20. Relative motion, such as rotational, translation or orbital, is provided between the device surface 42 and the first polishing surface 26. The polishing is performed for a predetermined period of time corresponding to at least the time required for the first member 22 to structurally degrade and become flush with the second member 24.

Please replace the paragraph on page 15, lines 21-31, with the following:

When the first polishing face 26 becomes substantially flush with the second polishing face 28, the contact of the second member 24 with the surface 42 will substantially reduce or prevent further abrasion to the device surface 42 by the first member 22. The polishing pad 20 will again have an appearance similar to that shown in Figs. 4 and 5. The polishing pad 20 can be reconditioned to perform additional polishing ~~be~~ by removing ~~an~~ another portion of the second member 24 to further expose the first member 22 for use in polishing additional surfaces or by other methods, such as those described in the Robinson patent.

Please replace the paragraph on page 16, lines 1-13, with the following:

The present invention provides the ability to control the amount of abrasive material exposed to a surface during a mechanical polishing operation. The control

afforded by the present invention allows for more automation and less monitoring of the polishing process than was possible with the prior art. While the subject invention provides these and other advantages over the prior art, it will be understood, however, that various changes in the details, materials and arrangements of parts and steps which have been herein described and illustrated in order to explain the nature of the invention may be made by those skilled in the art within the principle and scope of the invention as expressed in the appended claims.